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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/259,984	03/01/1999	YUKO S NISHIKAWA	21650.02200	5940
37123 7590 01/23/2008 FITCH EVEN TABIN & FLANNERY 120 SOUTH LASALLE SUITE 1600 CHICAGO, IL 60603			EXAMINER SALTARELLI, DOMINIC D	
			ART UNIT 2623	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/259,984	<b>Applicant(s)</b> NISHIKAWA ET AL.	
	<b>Examiner</b> Dominic D. Saltarelli	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 10, 11, 14-17, 19-26, 32-39, 41-50 and 52-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45-50, 52 and 65 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10, 11, 14-17, 19-26, 32-39, 41-44, 53-60 and 64 is/are rejected.
- 7) ☒ Claim(s) 61-63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 21, 2007 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-4, 10, 11, 14-17, 19-26, 32-39, 41-50, and 52-59 have been considered but are moot in view of the new grounds of rejection.

Regarding independent claims 1 and 23, applicant argues against the combination of Dillion and Riley, stating that one of ordinary skill in the art would not be motivated to combine the references in the stated manner (applicant's remarks, pages 16-17).

However, upon further consideration by the examiner, the Riley reference is unnecessary for meeting the claimed limitations, as the 64 K FIFO buffer disclosed by Dillion as part of the bus interface is sufficient to meet the claimed limitations for which Riley was previously relied upon. The rejections of claims 1 and 23 have been updated accordingly and applicant argument's regarding claims 1 and 23 are moot.

Regarding independent claim 45, the examiner has found the inclusion of a first video processor in the Internet processing element and a second video processor in the buffer logic circuit as recited in the claim to be allowable, thus applicant's arguments with regard to claim 45 are moot.

Regarding claims 53-56, applicant argues the buffer circuit taught by the combination as previously set forth does not teach the claims as currently amended (applicant's remarks, page 20).

In response the, claimed amendments are met by the combination of references as set forth, because the combination teaches at least two types of data are passed to the buffer logic circuit, sensory data and programming data related to the sensory data, both are broadcast data and both are digital signals. However, as there are new grounds of rejections being applied to independent claims 1 and 23, applicant's arguments against subsequent dependent claims are moot.

Regarding claim 57, the examiner is providing an additional reference to teach that it is well known to display selected programs in a calendar format, therefore applicant's arguments are moot.

Regarding claims 58 and 59, since the examiner has revised the grounds of rejection to remove the Riley reference, the examiner has introduced a new reference which explicitly teaches that it is well known to use multiplexers, address decoders, and plural buffers, as claimed, to transmit data over a bus, therefore applicant's arguments are moot.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 10, 11, 16, 17, 19-26, 32, 33, 38, 39, 41-44, and 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon (5,699,384, of record) in view of Legall et al. (6,005,565, of record) [Legall] and Naiff (5,982,363, of record).

Regarding claims 1 and 23, Dillon discloses an apparatus for displaying information comprising:

a circuit that receives wireless television communication signals (fig. 1, adapter card 124, col. 3, lines 31-42), the wireless television signals including sensory data (col. 4, lines 8-21) and provides digital signals comprising sensory data (received signals are digital, col. 3, lines 43-59);

a computer circuit for receiving data and further processing (fig. 1, computer 102);

a buffer logic circuit that receives the digital signals and facilitates communication (fig. 1, bus 135, col. 3, lines 60-67) is coupled with both the circuit that receives wireless television communication signals and computer circuit, wherein the buffer logic that facilitates communication facilitates communication between the circuit that receives wireless television communication signals and the computer circuit, including facilitating the transfer of commands (wherein the CPU sends control commands to the tuner and demodulator, col. 4, lines 8-21; col. 5, lines 38-61; and col. 6, lines 27-40) and the digital signals between the circuit the receives wireless television communication signals and the computer circuit, such that the buffer circuit receives data from the circuit that receives wireless television communication signals, buffers the data without decoding the data (in the 64 K byte FIFO buffer, col. 4, lines 52-57) and passes the data to the circuit that receives computer network communication signals (sensory data and command data are passed between the CPU and adapter card over the bus, col. 4, lines 8-21);

a circuit that displays the received wireless television communication signals on a display (the received signals are displayed on display screen 106 shown in fig. 1).

Dillon fails to disclose the information is displayed on a television, the wireless television signals include programming data related to the sensory data;

the computer circuit is a circuit that receives computer network communication signals; and a circuit that displays an option palette on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals.

In an analogous art, Naiff teaches using a personal computer to display content on a television (fig. 1), providing the benefit of PC resources for displaying content on a conventional television (col. 1 line 63 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus disclosed by Dillon to display the information on a television, as taught by Naiff, for the benefit of using PC resources for displaying content on a conventional television, which are more powerful than set top boxes and would negate the need to purchase a separate set top box for a television the user already owns.

Dillon and Naiff fail to disclose the wireless television signals include programming data related to the sensory data; the computer circuit is a circuit that receives computer network communication signals; and a circuit that displays an option palette on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals.

In an analogous art, Legall teaches an apparatus for displaying information on a television (fig. 1), wherein received wireless television signals include programming data related to sensory data (col. 2, lines 7-25); including a

circuit that receives computer network communication signals (col. 2, lines 26-37); and a circuit that displays an option palette [tool area] (Figure 2, left hand column of icons) (col. 2, lines 44-47) on a television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals (such as the 'Attractions' and 'EPG' icons), for the benefit of greatly increased interactivity to a user in an interactive television environment (col. 2, lines 26-59).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus disclosed by Dillon and Naiff to include programming data related to sensory data, a circuit that receives computer network communication signals, and a circuit that displays an option palette on the television, the option palette having a plurality of icons that facilitate a user's navigation through the received wireless television communication signals, as taught by Legall, for the benefit of greatly increasing the interactivity options to a user in the interactive television system, such as Internet access and a electronic program guide.

Regarding claims 2-4 and 24-26, Legall additionally discloses a circuit that displays a plurality of filtering options (fig. 3B, search window 375) (col. 3, lines 11-13) on the television, each filtering option representing a way in which the programming data in the received wireless television communication signals is displayed on the television (col. 3, lines 13-19), and the filtering options [power



search tool] are displayed by selecting an icon in the option palette [tool area] (col. 2, lines 44-47). These filtering options can comprise a category, such as movies, sports and drama, associated with the programming data (col. 4, lines 3-8).

Regarding claims 10, 11, 32, and 33, Legall additionally discloses filtering the programming data by a predetermined time period associated with the programming data (Figure 3B, items 351 and 352, col. 3, lines 39-42) in response to the user selecting a filtering option (col. 3, lines 43-45). This predetermined time period is shown in Figure 3B to be an hour.

Regarding claims 16, 17, 38, and 39, Legall additionally discloses an on-screen search window (Figure 3B, search window 375) (col. 3, lines 11-13) on the television, the on screen search window for displaying a search command entered by the user (340) (col. 3, lines 28-31), a remote keyboard (115) (col. 2 lines 26-28) in communication with the on-screen search window circuit such that the user can enter the search command in the on-screen search window via the remote keyboard (col. 3, lines 28-31), and a circuit (306) for searching the programming data in accordance with and in response to the entered search command (col. 3, lines 11-17).

Regarding claims 19 and 41, Legall additionally discloses a circuit that filters the programming data of the wireless television communication signals by channel and a circuit that displays a plurality of channels of programming data on the television (220) (col. 2, lines 40-47), and a circuit that permits the user to select a number of channels displayed on the television (col. 2, lines 57-59) in response to the user selecting an icon in the option palette (EPG icon from left hand column in Figure 2).

Regarding claims 20, 21, 42, and 43, Dillon, Naiff, and Legall disclose the apparatus and method of claims 1 and 23, wherein the wireless television communication signals are received from a wireless communication channel that is communicatively connected to a satellite (Dillon, col. 3, lines 43-59) and the computer network communication signals are received from a computer network communication channel that is communicatively connected to the Internet (Legall, col. 2, lines 26-37).

Regarding claims 22 and 44, Legall additionally discloses a remote controller for facilitating a user's selection of an icon (col. 2, lines 26-28).

Regarding claims 53 and 55, Dillon, Naiff, and Legall disclose the apparatus and corresponding method of claims 1 and 23, wherein the circuit that receives the digital signals and facilitates communication receives broadcast data

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in addition to the digital signals received from the circuit that receives wireless television signals (the additional broadcast data includes the programming data that is related to the sensory data introduced by Legall) and forwards the broadcast data to the circuit that receives computer network communication signals (Dillon, col. 4, lines 8-21) and displays it on the television (Naiff, TV 22).

Regarding claim 54, Dillon, Naiff, and Legall disclose the apparatus of claim 1, wherein the circuit that receives the digital signals and facilitates communication further receives commands from a user and forwards the received commands to the circuit that receives computer network communication signals (user input to the CPU is transmitted along the internal system bus, see Dillon, col. 5, lines 38-61).

Regarding claim 56, Legall additionally discloses decimating programming data (fig. 2, area 205, col. 2, lines 40-42) and blending the decimated portion of the programming data with computer network communication signals (col. 2, lines 38-47).

5. Claims 14, 15, 36, and 37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Naiff, and Legall, as applied to claims 1 and 23 above, and further in view of Maze et al. (6,216,264, of record) [Maze].

Regarding claims 14, 15, 36, and 37, Dillon, Naiff, and Legall disclose the apparatus and corresponding method of claims 1 and 23, wherein Legall additionally discloses a circuit for entering a search command in response to the user selecting the keys of a keyboard (Figure 3B, text field 340) and a circuit (fig. 3A, search engine 306) for searching the programming data in accordance with and in response to the entered search command (col. 3, lines 11-17). However, Dillon, Naiff, and Legall fail to disclose a circuit for displaying an on-screen keyboard.

Maze discloses a circuit for displaying an on-screen keyboard (Figure 6) and a remote controller for (450R) which enables a user to select the keys of the on-screen keyboard (col. 5, lines 17-25), so that only a remote control is required for entering text searches in a quick and recognizable fashion.

It would have been obvious at the time to modify the apparatus and corresponding method disclosed by Dillon, Naiff, and Legall to include a circuit for displaying an on-screen keyboard for entering a search command through the use of a remote controller as taught by Maze. The reason for doing so would be so that only a remote control is required for entering text searches in a quick and recognizable fashion.

6. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Naiff, and Legall as applied to claim 32 above, and further in view of Schultheiss (6,208,384, of record).

Regarding claims 34 and 35, Dillon, Naiff, and Legall disclose the method of claim 32, but fail to disclose the filtering option of filtering the programming data by a predetermined time period associated with the programming data is time period being a day or month.

Schultheiss discloses software (col. 8, lines 48-51) which can display TV listings [programming data] which is viewer customizable (col. 8, lines 60-65), most notably regarding how many days of listings to display, allowing viewer customization of the EPG according to interest.

It would have been obvious at the time to modify the method of Dillon, Naiff, and Legall to provide a filtering option that filters the programming data by a predetermined time period of a day or month as taught by Schultheiss. The filtering option taught by Schultheiss is an open-ended form of customization, and thus the reason for doing so would be to provide further customization of displayed programming data (EPG) according to viewer interest.

7. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Naif, and Legall as applied to claim 1 above, and further in view of Lemmons et al. (6,266,814) [Lemmons].

Regarding claim 57, Dillon, Naif, and Legall disclose the apparatus of claim 1, but fail to disclose the option palette comprises a planner screen that displays a calendar indicating programs that are selected.

In an analogous art, Lemmons discloses a program guide comprising a planner screen that displays a calendar indicating programs that are selected (fig. 8, col. 16, lines 20-39), providing "a convenient graphical user interface that allows the viewer to quickly navigate to program schedule information for programs to be telecast (or being telecast) on a specified date." (col. 16, lines 25-28). The calendar view uses highlighting to specify dates for which programming data of interest is available (col. 16, lines 56-65, wherein the programming data is for selected programs, col. 6, lines 45-55).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus of Dillon, Naif, and Legall to include a planner screen that displays a calendar indicating programs that are selected, as taught by Lemmons, for the benefit of providing a convenient graphical user interface that allows the viewer to quickly navigate to program schedule information for selected programming

8. Claims 58-60 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Naif, and Legall as applied to claims 1 and 23 above, and further in view of Zhao et al. (6,405,267) [Zhao].

Regarding claims 58-60 and 64, Dillon, Naif, and Legall disclose the apparatus and method of claims 1 and 23, wherein the buffer logic includes a wideband buffer (Dillon's 64 K byte FIFO buffer, col. 4, lines 42-57) for communication of content from the television circuit to the computer network

communication circuit, but fail to disclose the buffer logic circuit further comprises a first multiplexer that communicates with the circuit that receives wireless television communication signals, a first address decoder coupled with the first multiplexer, a second multiplexer that communicates with the circuit that receives computer network communication signals and a second address decoder coupled with the second multiplexer, where the first and second multiplexers couple with a first narrowband buffer, a second narrowband buffer and the wideband buffer such that data is communicated between the circuit that receives wireless television communication signals and the circuit that receives computer network communication signals through the first and second multiplexers and one or more of the first and second narrowband buffers and the wideband buffer as defined by the first and second address decoders.

In an analogous art, Zhao teaches a system for increasing effective bus bandwidth (col. 2, lines 40-45), comprising a multiplexer, address decoder, and narrowband buffers for command data (fig. 4, col. 5 line 44 - col. 6 line 3, wherein the multiplexer is MUX 13, address decoder 11, and the narrowband buffers are storing buffers 30), wherein the transmittal of commands and parameters is between two processors (CPU 1 and graphics device 5, col. 4, lines 13-36).

It would have been obvious at the time to a person of ordinary skill in the art to modify the apparatus and method of Dillon, Naif, and Legall to include a multiplexer, address decoder, and narrowband buffers for command data such that data is communicated between the circuits through to multiplexer to an

appropriate buffer under the control of the address decoder, as taught by Zhao, for the benefit of increasing the effective bus bandwidth of the buffer logic circuit. There is a first multiplexer and addresses decoder coupled with the circuit that receives wireless television communication signals and a second multiplexer and addresses decoder coupled with the circuit that receives computer network communication signals because the flow of commands using the narrowband buffers is a two way process between the circuits (primarily between the CPU and demodulator, Dillon, col. 6 line 10 - col. 7 line 6, wherein the CPU and demodulator send command and state data back and forth between the two in order to control the demodulator).

***Allowable Subject Matter***

9. Claims 45-50, 52, and 65 are allowed.
10. Claims 61-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter: The examiner has found that the inclusion of a first video processor into the circuit that receives computer network communication signals and a second video processor into the buffer logic circuit into the structures claimed in claims 1 and 45 to create a novel apparatus for displaying information on a television, elevating the buffer logic from a mere bus which simply passes data from one point to another, a common



and well known feature, into an active element which participates in the creation of displayed content, whose final processing before display is performed by the Internet processing element, as described in the specification (for example, see originally filed specification, fig. 2C and pages 5-7, which describes the buffer logic 204 as performing additional video processing prior to final processing done by the Internet processing element 202).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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